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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Develop
Additional Methods to Implement the California
Renewables Portfolio Standard Program.

Rulemaking 06-02-012
(Filed February 16, 2006)

**ADMINISTRATIVE LAW JUDGE'S RULING
REQUESTING PRE-WORKSHOP COMMENTS ON 2008 MARKET PRICE
REFERENT FOR THE RENEWABLES PORTFOLIO STANDARD PROGRAM**

1. Request for Pre-Workshop Comments

Energy Division staff will be holding a workshop which will provide the parties an opportunity to discuss potential modifications to the market price referent (MPR) methodology, inputs, and assumptions prior to the calculation of the 2008 MPR. Staff will circulate the workshop date, location, and agenda to the service lists for this proceeding and Rulemaking (R.) 06-05-027.

This ruling requests pre-workshop comments that will aid in developing the agenda and inform the discussion at the workshop. Pre-workshop comments may be filed and served in accordance with the instructions in this ruling. Comments may be no longer than 30 pages, with no more than 25 pages of germane attachments. Models or complex calculations submitted with comments must be made available to the service list on a web site or a CD.¹

¹ If appropriate, a Notice of Availability should be used, in accordance with Rule 1.9 of the Commission's Rules of Practice and Procedure. Unless otherwise indicated, all subsequent citations to rules refer to the Commission's Rules of Practice and Procedure,

Footnote continued on next page

Comments must be filed and served on the service lists for this proceeding and R.06-05-027 not later than February 28, 2008. Reply comments are not necessary and will not be accepted. It is anticipated that there will be an opportunity for post-workshop comments and reply comments.

2. Background

The California renewables portfolio standard (RPS) program was initiated by Senate Bill (SB) 1078 (Sher), Stats. 2002, ch. 516, and has been amended several times in the intervening years.² To establish the market price necessary for implementing RPS procurement by investor-owned utilities (IOUs), the legislation requires this Commission, in consultation with the California Energy Commission (CEC), to

establish a methodology to determine the market price of electricity for terms corresponding to the length of contracts with renewable generators, in consideration of the following:

- (1) The long-term market price of electricity for fixed price contracts, determined pursuant to the electrical corporation's general procurement activities as authorized by the Commission.
- (2) The long-term ownership, operating, and fixed-price fuel costs associated with fixed-price electricity from new generating facilities.
- (3) The value of different products, including baseload, peaking, and as-available output.

Section 399.15(c).

The MPR then functions to deem reasonable per se and allow to be recovered in rates those "[p]rocurement and administrative costs associated with

which are codified at Chapter 1, Division 1 of Title 20 of the California Code of Regulations, and all citations to sections refer to the Public Utilities Code.

² RPS legislation is codified at Pub. Util. Code §§ 399.11-399.20.

long-term contracts entered into by an electrical corporation for eligible renewable energy resources pursuant to this article, at or below the market price determined by the commission pursuant to subdivision (c) of Section 399.15. . .” (§ 399.14(g).) If a contract price (on a net present value basis) exceeds the MPR, it triggers consideration of methods to fund the above-market costs of long-term contracts for RPS-eligible generation entered by IOUs and approved by the Commission.³

In Decision (D.) 03-06-071, the Commission determined that it would rely on the second and third considerations set out in §399.15(c). In D.04-06-015, the Commission developed a "proxy plant" to model the long-term costs “associated with fixed-price electricity from new generating facilities,” taking into account “the value of different products, including baseload, peaking, and as-available output.” In D.05-12-042, the Commission refined and stabilized the MPR model.

The MPR model, as set out in D.05-12-042 and applied for the past several years, requires several types of input data, including natural gas prices, capital costs, operating costs, finance costs, taxes, and power delivery assumptions. The primary input drivers for the MPR calculation are the California gas price forecast, power plant capital costs, and the capacity factor for a proxy baseload plant.

³ The original method for funding above-market costs was the use of Supplemental Energy Payments (SEPs), administered by the CEC. See §§399.13(c), 399.15(b)(5). The SEP program was eliminated by SB 1036 (Perata), Stats. 2007, ch. 685. The existing funds will be refunded to the three large IOUs (Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company) and, along with the portion of funds which would have been collected through January 1, 2012, used to fund above-market costs of their long-term RPS contracts.

In 2007, the Commission made a temporary change to the MPR methodology to include a "greenhouse gas adder" (GHG adder). In D.05-12-042, the Commission denied requests to include a GHG adder in the MPR, preferring to wait until California's climate change policies became better defined. On June 25, 2007, California Wind Energy Association (CalWEA) and Green Power Institute filed a Petition for Modification of D.05-12-042, to include a GHG adder in the MPR for 2007 and later years. In D.07-09-024, the Commission authorized the use of a GHG adder for the 2007 MPR only.⁴ That decision authorized the assigned Commissioner and assigned administrative law judges in R.06-02-012, in R.06-05-027, and/or their successor proceedings, to set a schedule for examining the MPR for 2008 and later years. The workshop and comments requested here are parts of that process. After considering the information developed in the workshop and all comments and reply comments, the Commission may modify any of its prior MPR decisions, or issue a new decision on the MPR, or it may conclude that no changes warranting a decision are needed.

3. Guidance for Comments

Because of the limited time available to refine the MPR for the 2008 RPS solicitation, Energy Division staff has provided suggestions for the structure and content of pre-workshop comments, which are set forth in this ruling. Commenters may address these subjects by presenting proposals for modifications to the MPR methodology or inputs, or by answering the questions developed by staff, below, or any combination of these approaches. Commenters

⁴ http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/73031.PDF

with similar views are encouraged to present joint comments. Comments that are specific and provide factual information will be most useful in preparing for the workshop.

Any proposed modification to the MPR methodology, assumptions, and/or inputs should:

- be consistent with MPR guiding principles outlined in D.05-12-042;
- explain the policy basis for the proposal;
- include supporting documentation; and
- if relevant, include a modified version of the 2007 MPR model⁵ that reflects the proposed modifications, which must be highlighted within the modified version.

All comments should, as appropriate, refer to the decisions and resolutions implementing the MPR to date. These are:

- D.04-06-015 (establishing initial MPR methodology);⁶
- Resolution E - 3942 (implementing 2004 MPR methodology);⁷
- D.05-12-042 (stabilizing MPR methodology);⁸
- Resolution E-3980 (implementing 2005 MPR);⁹
- Resolution E-4049 (implementing 2006 MPR);¹⁰
- D.07-09-024 (authorizing use of GHG adder for 2007 MPR);¹¹
and

⁵ The model may be found at <http://www.ethree.com/MPR.html>

⁶ http://www.cpuc.ca.gov/word_pdf/FINAL_DECISION/37383.doc

⁷ http://www.cpuc.ca.gov/WORD_PDF/FINAL_RESOLUTION/48242.doc

⁸ http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/52178.doc

⁹ http://www.cpuc.ca.gov/WORD_PDF/FINAL_RESOLUTION/55465.doc

¹⁰ http://www.cpuc.ca.gov/word_pdf/FINAL_RESOLUTION/63132.doc

¹¹ http://docs.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/73031.doc

- Resolution E-4118 (implementing 2007 MPR methodology, including GHG adder).¹²

4. Subjects for Comments

4.1 MPR Non-Gas Methodology and Inputs

4.1.1. Installed Capital Costs

Applying criteria set out in D.05-12-042, staff identified the publicly available installed capital costs for the 2005 MPR combined cycle gas turbine (CCGT) proxy using the reported capital costs (in dollars per kilowatt) of comparable CCGT plants, based on two plants with publicly available cost data: Palomar (SDG&E), and Cosumnes (SMUD).¹³ The same CCGTs were used to derive the installed capital costs for the 2006 and 2007 MPR.

- Please identify any additional CCGTs which conform to the selection criteria identified in D.05-12-042 that should be incorporated into the installed capital cost calculation. Please indicate where the publicly available data for each CCGT identified may be found.

D.05-12-042 determined that capital costs for the 2005 MPR should not be escalated beyond 2010 because "... it should be assumed that technology improvements offset the escalation of capital costs, so no further adjustment due to inflation would be necessary." (*Mimeo.*, p. 44.)

- Should the MPR methodology adopt a rolling five-year time frame for capital cost escalation, *e.g.*, the 2008 MPR would escalate capital costs through 2013; the 2009 MPR would escalate capital costs through 2014; etc.?

¹² http://docs.cpuc.ca.gov/word_pdf/FINAL_RESOLUTION/73594.doc

¹³ See Resolution E-4049, Appendix C, for a detailed discussion of how the installed capacity cost for the 2006 MPR was developed.

http://www.cpuc.ca.gov/word_pdf/FINAL_RESOLUTION/63132.doc

In December 2007, the CEC formally adopted its “Comparative Costs of California Central Station Electricity Generation Technologies” report.¹⁴

- To what extent should the CCGT inputs and assumptions of this report be used to update the MPR inputs and assumptions for 2008 and later years? Please specifically identify each input or assumption and provide a specific justification for the use of each for the MPR.

4.1.2. Capital Cost Escalation Rate

In September 2007, the Edison Foundation issued a report prepared by the Brattle Group entitled, "Rising Utility Construction Costs: Sources and Impacts."¹⁵ In sum, this report finds that, nationwide, the total cost of constructing steam generating power plants increased significantly between 2004 and 2007. It reports that in 2006 the cost of gas turbines rose by 17%. The report also states that these costs are not reflected in widely accepted industry resources such as the U.S. Army Corps of Engineers' Engineering and Design Civil Works Construction Cost Index System¹⁶ and the Energy Information Administration's (EIA) 2007 Annual Energy Outlook.¹⁷

- Please discuss to what extent the escalation indices used in the MPR need to be adjusted, if at all, to reflect the findings in the

¹⁴ <http://www.energy.ca.gov/2007publications/CEC-200-2007-011/CEC-200-2007-011-SF.PDF>

¹⁵ http://www.eei.org/industry_issues/electricity_policy/state_and_local_policies/rising_electricity_costs/Rising_UTILITY_Construction_Costs.pdf

¹⁶ The September 30, 2007 update may be found at <http://www.usace.army.mil/publications/eng-manuals/em1110-2-1304/entire.pdf>

¹⁷ [http://www.eia.doe.gov/oiaf/archive/aeo07/pdf/0383\(2007\).pdf](http://www.eia.doe.gov/oiaf/archive/aeo07/pdf/0383(2007).pdf) (p. 36).

Brattle Group report or other information about construction costs for CCGTs. Please be specific about the source(s) of information used and, if they are publicly available, indicate where they may be found.

4.1.3. Capacity Factor

Pursuant to D.05-12-042, the capacity factor for the MPR's proxy CCGT is calculated using each utility's time of delivery (TOD) profile to estimate a statewide average capacity factor.

In the Prehearing Conference Statement of the California Wind Energy Association and the California Cogeneration Council (jointly, CalWEA) (December 6, 2007), CalWEA suggests that the Commission revisit the methodology used to establish the CCGT capacity factor. CalWEA proposes three options:

- actual CCGT capacity factors in recent years (see the CEC 2007 generation cost study, at Table 30¹⁸);
- California Independent System Operator (CAISO) calculations of CCGT capacity factors based on CAISO market prices (see 2006 CAISO Annual Report, at Chapter 2, Section 6¹⁹); and
- calculations of CCGT operating hours based on historical daily electric market prices in the NP-15 and SP-15 market.

CalWEA believes that all of these options would result in a CCGT capacity factor in the 60% to 75% range.

¹⁸ Table 30: Actual Historical Capacity Factors
<http://www.energy.ca.gov/2007publications/CEC-200-2007-011/CEC-200-2007-011-SF.PDF>

¹⁹ <http://www.caiso.com/1bb7/1bb77b241b920.pdf>

- Please comment on CalWEA's proposals both in the context of the existing MPR methodology and in the context of any changes to the methodology proposed in other sections of your comments.
- Please specifically identify and justify any preference for one CalWEA option or a combination of options, both as compared with the other options presented by CalWEA and as compared with the current MPR methodology.
- Please identify any additional publicly available information that would be relevant to choosing among these options.

4.1.4. Transmission

CAISO's Market Redesign and Technology Upgrade (MRTU) is currently scheduled to begin sometime in 2008.²⁰

- How should the uncertainty about the implementation date for MRTU be treated for purposes of the 2008 MPR?
- Once MRTU is effective, to what extent should the MPR methodology be modified to reflect locational marginal pricing?
- Please identify any other potential impacts of MRTU on the MPR methodology, assumptions, and/or inputs. Please be specific about the nature of the impact.
- For any impact identified that should be managed in the 2008 MPR, please make a specific proposal for doing so.

The 2007 MPR calculates a simple average of all CAISO generation meter multipliers (GMM) to derive a statewide transmission line loss value.

- Please indicate if this approach should be modified for the 2008 MPR and later years, and, if so, how.

²⁰ <http://www.aiso.com/docs/2001/12/21/2001122108490719681.html>

4.1.5. Other Topics

If any other topic related to non-gas methodology or inputs should be considered at the workshop, please identify the topic and justify its inclusion. If relevant, please make a specific proposal about the topic.

4.2 MPR Gas Methodology and Inputs

4.2.1 Fuel Price Risk Premium

The CEC's 2007 Integrated Energy Policy Report (IEPR)²¹ recommends that the MPR methodology be modified to better reflect the cost of natural gas price volatility and the market costs of long-term, fixed price power contracts. In January 2008, the CEC issued a report prepared by KEMA, Inc. entitled, "Achieving California's 33 Percent Renewable Portfolio Standard Goal: Policy and Analysis Options," in which this issue was specifically addressed.²²

- Please comment on the CEC's recommendations in the context of the existing MPR methodology and inputs.
- To what extent should the CEC's recommendations be integrated into the MPR methodology for 2008 and later years? Please specifically identify the recommendations that should be incorporated and explain the reasons.
- If any changes to the methodology should be made, what changes, if any, to the MPR gas inputs would be required as well?

²¹ <http://www.energy.ca.gov/2007publications/CEC-100-2007-008/CEC-100-2007-008-CMF.PDF>

²² See Chapter 2, which recommends that this Commission adopt a Capital Asset Pricing Model (CAPM) methodology instead of the weighted average cost of capital (WACC), which is currently used to establish MPR values.
<http://www.energy.ca.gov/2007publications/CEC-300-2007-009/CEC-300-2007-009-F.PDF>.

4.2.2 Other Topics

If any other topic related to gas methodology or inputs should be considered at the workshop, please identify the topic and justify its inclusion. If relevant, please make a specific proposal about the topic.

4.3 GHG Adder

D.07-09-024 directs that the 2007 MPR use the GHG adder adopted in D.04-12-048, but that further consideration be given to the GHG adder for 2008 and later years. Research and analysis are now being undertaken in R.06-04-009 to model the costs of compliance with Assembly Bill (AB) 32 (Nunez/Pavley), Stats. 2006, ch. 488, within the electricity sector and the integration of GHG emissions standards into procurement policies. It is not clear whether this work will be completed in time to be incorporated into the 2008 MPR. Further, decisions on major policy issues, such as the point of GHG regulation, are currently under review.

- In view of the timing of GHG policy development and analysis noted above, should a comprehensive and permanent change to the MPR methodology to include a GHG adder be made in 2008? Why or why not?
- If a permanent change should be made in 2008, how should the GHG adder be developed? Please specifically identify methods, inputs, and models that should be used.
- Should another interim GHG adder for the 2008 MPR be used? If so, should the same methodology that was adopted for the 2007 MPR be used? If a different interim methodology is recommended, please specify the methods, inputs, and models that should be used. If the same methodology is recommended, please identify any updates to the inputs that should be included.
- If an interim 2008 GHG adder should be adopted, please comment on the process for making a permanent change to the MPR to include a GHG adder for later years.

IT IS RULED that:

1. Pre-workshop comments of not more than 30 pages (plus no more than 25 pages of germane attachments) may be filed and served in accordance with this ruling.
2. Comments must be filed and served not later than February 28, 2008 on the service lists for Rulemaking (R.) 06-02-012 and R.06-05-027.
3. Models or complex calculations submitted with comments must be made available to the service lists on a web site or a CD.
4. Reply comments will not be allowed.

Dated February 8, 2008, at San Francisco, California.

/s/ ANNE E. SIMON
Anne E. Simon
Administrative Law Judge

INFORMATION REGARDING SERVICE

I have provided notification of filing to the electronic mail addresses on the attached service lists.

Upon confirmation of this document's acceptance for filing, I will cause a Notice of Availability of the filed document to be served upon the service list to this proceeding, as well as Rulemaking 06-05-027, by U.S. mail. The service list I will use to serve the Notice of Availability of the filed document is current as of today's date.

Dated February 8, 2008, at San Francisco, California.

/s/ ELIZABETH LEWIS

Elizabeth Lewis